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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,117	03/31/2004	Erol Girt	146712004800	3703

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EXAMINER

RICKMAN, HOLLY C

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,117

Applicant(s)

GIRT ET AL.

Examiner

Holly Rickman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 8-13, 18, 19, 23, 24 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 14-17, 20-22 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-7, 14-17, 20-22, 25, in the reply filed on 6/12/06 is acknowledged.

Claim Objections

2. Claim 20 is objected to under 37 CFR 1.75(c), as being a substantial duplicate of claim 6. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 and 20 are rejected as being rendered indefinite by the phrase "where in Cr concentration is larger and equal to 17 atomic %". It is not clear how the Cr concentration can be larger *and* equal to 17% at the same time.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 5, 7, 14, 17, 21 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Nolan (US 2004/0258963).

Nolan discloses a magnetic recording medium having a substrate formed from NiP-coated AlMg, a first crystalline layer, a second crystalline layer formed from an hcp material such as Ru, a third crystalline layer and a magnetic recording layer formed from a CoCr alloy. Each of the crystalline layers is non-magnetic. See paragraphs 98-103, 125-134. The examiner takes the position that the Ru layer taught by Nolan would be capable of providing RKKY coupling between the first and third intermediary layer if they were both magnetic by virtue of the fact that is formed of the same material as disclosed by Applicants.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 2-4, 15, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nolan (US 2004/0258963).

Nolan discloses a magnetic recording medium having a substrate formed from NiP-coated AlMg, a first crystalline layer, a second crystalline layer formed from an hcp material such as Ru, a third crystalline layer and a magnetic recording layer formed from a CoCr alloy. Each of the crystalline layers is non-magnetic. See paragraphs 98-103, 125-134. The examiner takes the position that the Ru layer taught by Nolan would be capable of providing RKKY coupling between the first and third intermediary layer if they were both magnetic by virtue of the fact that is formed of the same material as disclosed by Applicants.

Nolan teaches the use of various materials for the first and third crystalline layers including hcp materials such as Co. It would have been obvious to one of ordinary skill in the art at the time of invention to choose hcp Co materials from the groups of materials disclosed as being suitable for the first and third crystalline layers in view of the functional equivalence of each of the materials disclosed. See paragraphs 129, 132, 144

Allowable Subject Matter

9. Claims 6 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art to Nolan fails to teach or suggest the claimed multi-layered intermediary structure in combination with a magnetic layer having a Cr-rich and a Cr-dilute layer containing specific amounts of Cr.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Holly Rickman
Primary Examiner
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